WHAT IS CLAIMED IS:

1. A method for compiling data to enhance diagnosis of a myocardial infarction, the method comprising:

 measuring multiple-lead electrocardiogram data of multiple patients;

 sorting the measured data into groups, each group correlating measured data from one or more of the patients with ischemia in a heart region; and

 storing the group correlations.

2. The method of claim 1, wherein the measuring step further comprises:

 acquiring electrocardiogram data from the patients with the multiple-lead electrocardiogram while the patients are experiencing temporary ischemia during percutaneous transluminal coronary angioplasty; and

 identifying at least one location of the temporary ischemia on the heart of each patient.

3. The method of claim 1, wherein the measuring step further comprises:

 acquiring electrocardiogram data from the patients with the multiple-lead electrocardiogram while the patients are suspected to be experiencing ischemia;

 confirming that the patients experienced ischemia; and

 identifying at least one location of the ischemia on the heart of each patient.

4. The method of claim 3, wherein the confirming and mapping steps comprise conducting an angiogram procedure.

5. The method of claim 2 or 3, wherein the at least one location is taken from a group consisting of an anteroseptal location, an inferior location, a posterolateral location.

6. The method of claim 1, wherein the measuring step includes measuring cardiac data using an electrocardiogram device having greater than 12 leads.

7. The method of claim 6, wherein the measuring step includes measuring the cardiac data using an electrocardiogram device having 62 leads.

8. A method for enhancing diagnosis of a myocardial infarction in a patient, the method comprising:

3   matching cardiac data acquired from the patient with stored cardiac ischemia

4 correlation data, wherein the stored cardiac data is derived from multiple ischemia patients

5 sorted into groups of patients based on locations on the ischemia patients' hearts where

6 ischemia occurred; and

7   identifying at least one location of ischemia on the patient's heart, based on

8 the stored cardiac data that matches the acquired cardiac data.

1   9. The method of claim 8, wherein the at least one location is taken from

2 a group consisting of an anteroseptal location, an inferior location, a posterolateral location.

1   10. The method of claim 8, further comprising determining whether a

2 myocardial infarction occurred in the patient.

1   11. The method of claim 8, further comprising determining a size of the

2 myocardial infarction.

1   12. The method of claim 11, wherein determining a size of the myocardial

2 infarction comprises:

3   defining a relationship between at least one electrocardiogram characteristic

4 and a typical myocardial infarction size; and

5   comparing the acquired electrocardiogram data and the at least one

6 electrocardiogram characteristic to determine whether the myocardial infarction has the

7 typical myocardial infarction size.

1   13. A method for enhancing diagnosis of a myocardial infarction in a heart

2 of a patient, the method comprising:

3   acquiring cardiac data from the heart using a multiple-lead electrocardiogram

4 device;

5   matching the cardiac data to stored cardiac data derived from at least one

6 ischemia patient, wherein the location of ischemia on the ischemia patient's heart is known;

7 and

8   displaying information regarding at least one location of ischemia on the

9 patient's heart, based on the matching stored cardiac data for the ischemia patient.

1   14. A system for using stored electrocardiogram data to enhance diagnosis

2 of a myocardial infarction in the heart of a patient, the system comprising:

3   a data storage module for storing a correlation database derived from

4   electrocardiogram data of multiple patients, the patients having either experienced a

5   myocardial infarction or temporary cardiac ischemia during percutaneous transluminal

6   coronary angioplasty and the data being sorted according to locations of ischemia on the

7   hearts of the patients; and

8   computer software for enabling comparison of new electrocardiogram data to

9   the stored electrocardiogram data to determine a location of ischemia in the heart of the

10   patient.

1   15.   The system of claim 14, further comprising:

2   at least one disposable substrate for placement on the patient, the substrate

3   including multiple electrocardiogram leads; and

4   at least one display module for displaying information about the patient's heart

5   to a user.

1   16.   The system of claim 17, wherein the display module is configured to

2   provide an integral map of the patient's heart and a three-dimensional image of the patient's

3   heart which shows a location of ischemia.

1   17.   An apparatus for enhancing diagnosis of myocardial infarctions, the

2   apparatus comprising a database derived from electrocardiogram data from multiple patients

3   with cardiac ischemia in known locations on the heart, the database derived by sorting the

4   electrocardiogram data into multiple groups based on the known locations.

1   18 .   The apparatus of claim 17, further comprising angiogram or thallium

2   scan data for each of the multiple patients.

1   19.   An apparatus for enhancing diagnosis of myocardial infarctions, the

2   apparatus comprising a disposable panel having multiple electrocardiogram leads, the panel

3   configured for placement on or under a patient to acquire cardiac data from the patient.